

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for performing a handoff from an asynchronous base station to a synchronous base station, comprising the steps of:

- a) receiving, at a mobile station from the asynchronous base station, a neighbor list that identifies one or more synchronous base stations neighboring the asynchronous base station;
- b) setting a common channel between the synchronous base station and the [[a]]mobile station;
- [[b]]c) determining whether there is an asynchronous base station to be handed off in neighbor asynchronous base stations based on monitoring information of the neighbor asynchronous base stations;
- [[c]]d) if there is no asynchronous base station, requesting a handoff to the synchronous base station and receiving, a compressed mode message from the synchronous base station through the common channel, a compressed mode message that includes, for each synchronous base station neighboring the asynchronous base station, (i) pseudo noise (PN) sequence zero offset timing information based on a common code and a zero offset, (ii) long code state information, and (iii) synchronous channel super frame timing information;
- [[d]]e) after receiving the PN sequence zero offset timing information for each synchronous base station neighboring the asynchronous base station, selecting, from among the one or more synchronous base stations identified by the neighbor list, a synchronous base station to be handed off based on that base station having a pilot signal with a maximum value; the compressed mode message;

f) obtaining a long code state and a synchronous channel super frame timing from the long code state information and the synchronous channel super frame timing information for the synchronous base station selected; and

[[e]]g) performing the handoff from the asynchronous base station to the synchronous base station selected,

wherein obtaining the long code state and the synchronous channel super frame timing involves: (i)

wherein the step d) includes the steps of:

~~d1) obtaining a pseudo noise (PN) sequence zero offset timing based on a common code and a zero offset; and~~

~~d2) obtaining a long code state and a synchronous channel super frame timing, and~~

wherein the step d2) includes the steps of:

~~d21) obtaining a synchronization of the common channel. [[;]]~~

~~d22) (ii) storing one period of the compressed message transmitted through the common channel, and[[;]]~~

~~d23) (iii) selecting the maximum value among long code states and synchronous channel super frame timings obtained from the compressed message transmitted through the common channel at every period.~~

2. (Original) The method as recited in claim 1, wherein information transmitted through the common channel includes a common code, a zero offset, a long code state and a synchronous channel super frame timing.

3. Cancelled

4. (Currently amended) The method as recited in claim 2, wherein the common channel starts to transmit ~~is transmitted~~ in synchronization with a starting point of a pilot channel of the synchronous base station.

5. Cancelled

6. (Currently amended) The method as recited in claim 1, wherein obtaining the long code state and the synchronous channel super frame timing involves the step d2) ~~includes the steps of:~~

~~d21)-(i)~~ obtaining a synchronization of the common channel,[[;]]

~~d22)-(ii)~~ storing one period of the information transmitted through the common channel,[[;]] and

~~d23)-(iii)~~ selecting the most frequent one among long code states and synchronous channel super frame timings obtained from the information transmitted through the common channel at every period.

7. (Original) The method as recited in claim 2, wherein the long code state and the synchronous channel super frame timing are N-ary modulated and then transmitted.

8. (Currently amended) A method for performing a handoff from an asynchronous base station to a synchronous base station, comprising the steps of:

a) receiving, at a mobile station from the asynchronous base station, a neighbor list that identifies one or more synchronous base stations neighboring the asynchronous base station;

[[a]]b) setting at least one common channel between the synchronous base station and the [[a]] mobile station;

[[b]]c) determining whether there is an asynchronous base station to be handed off in neighbor asynchronous base stations based on monitoring information of the neighbor asynchronous base stations;

[[c]]d) if there is no asynchronous base station, requesting a handoff to the synchronous base station and receiving, ~~a compressed mode message from the synchronous base station through a common channel,~~ a compressed mode message that includes, for each synchronous base station neighboring the asynchronous base station, (i) pseudo noise (PN) sequence zero offset timing information based on a common code and a zero offset, (ii) long code state information, and (iii) synchronous channel super frame timing information;

[[d]]e) after receiving the PN sequence zero offset timing information for each synchronous base station neighboring the asynchronous base station, selecting, from among the one or more synchronous base stations identified by the neighbor list, a synchronous base station to be handed off based on that base station having a pilot signal with a maximum value; the compressed mode message;

f) obtaining a long code state and a synchronous channel super frame timing from the long code state information and the synchronous channel super frame timing information for the synchronous base station selected; and

[[e]]g) performing the handoff from the asynchronous base station to the synchronous base station selected,

wherein obtaining the long code state and the synchronous channel super frame timing involves: (i)

wherein the step d) includes the steps of:

— d1) obtaining a pseudo noise (PN) sequence zero offset timing based on a common code and a zero offset; and

— d2) obtaining the long code state and a synchronous channel super frame timing, and

— wherein the step d2) includes the steps of:

— d21) obtaining a synchronization of the common channel,[[;]]

— d22) (ii) storing one period of the compressed message transmitted through the common channel,[[;]] and

— d23) (iii) selecting the maximum value among long code states and synchronous channel super frame timings obtained from the compressed message transmitted through the common channel at every period.

9. (Original) The method as recited in claim 8, wherein information transmitted through the common channel includes a common code, a zero offset, a long code state and a synchronous channel super frame timing.

10. Cancelled

11. (Currently amended) The method as recited in claim 9, wherein the common channel starts to transmit ~~is transmitted~~ in synchronization with a starting point of a pilot channel of the synchronous base station.

12. Cancelled

13. (Currently amended) The method as recited in claim 8, wherein obtaining the long code state and the synchronous channel super frame timing involves: the step of d2) includes the steps of:

d21)-(i) obtaining a synchronization of the common channel,[[;]]

d22)-(ii) storing one period of the information transmitted through the common channel,[[;]] and

d23)-(iii) selecting the most frequent one among long code states and synchronous channel super frame timings obtained from the information transmitted through the common channel at every period.

14. (Original) The method as recited in claim 9, wherein the long code state and the synchronous channel super frame timing are N-ary modulated and then transmitted.